# The Continuum Paradigm: Reality or Fiction?

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Abstract—This paper summarizes five papers a session of the special track "The Continuum Paradigm". In their research, Mantelaers & Zoet focus on the viewpoints of the Continuum Paradigm, namely: 1) Continuous Reporting, 2) Continuous Monitoring, 3) Continuous Auditing, and 4) Continuous Assurance. Their research groups on the hand focus on accountants (Future-proof auditor) and on the other hand financials (Future Proof Financial).

Keywords-component: Continuum paradigm, continuous reporting, continuous monitoring, continuous auditing, continuous assurance, grounded theory, job titles, hospitality, going-concern assessment, forecasting algorithms, sustainability, (non)financial data, continuous measurement, cybersecurity, counter-accounting.

## I. INTRODUCTION

The continuum paradigm includes four main viewpoints: continuous reporting, continuous monitoring, continuous auditing and, continuous assurance. Although various literature reviews in the field of the continuum paradigm have been published in recent years, there is a degree of uncertainty about the actual difference between these viewpoints. The first debate is about the actual definition of the word "continuous". Secondly a debate surrounds the main differences between 1) monitoring, 2) auditing and 3) assurance. The main differences between these three viewpoints can be found in 1) the type of object they are monitoring (monitoring object, audit object, assurance object), 2) the standards framework applied during each viewpoint and 3) the intended user(s) of each viewpoint. In addition to the previous mentioned difference, also a vivid discussion around the term continuous is that a strict definition of 'continuous' is missing. Since the degree of being continuous differs per situation, the interpretation of continuous can be different each time. In one case this means that every month is monitored and in the other case it means that every payment is monitored.

It is important to note that the continuum paradigm is not only relevant for the financial sector, but also relevant for other sectors, such as the hospitality sector. In the next section, several striking examples are explained for A) the hospitality sector, B) the financial sector, in particular C) the accountancy industry.

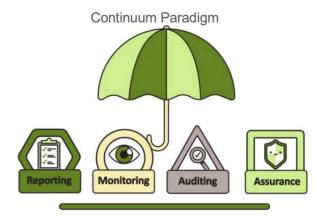


Figure 1: Continuum Paradigm

### II. SUBMISIONS

The first paper about "Variation in job titles within the hospitality workforce: A computation grounded theory approach" by Kitchiner et al. is an upcoming topic in the hospitality [1]. The wide spectrum of job titles worldwide has become the main cause of confusion amongst the general public, organizations, and practitioners of services. Diversity and inconsistency in job titles have implications for the wider perception of the workforce and their career paths. This study aims to understand the variation in job titles in the hospitality industry for management jobs and propose standardization to combat disparity. A dataset of 1.000 job titles has been collected. This has been analyzed by means of grounded theory and computational grounded theory. The results show 210 standardized job titles. Secondly, computational grounded theory can achieve similar results to grounded theory.

The second paper, "Towards a going concern assessment pipeline" by Verhoeven et al. is about the assessment of the going concern analysis in the audit process, based on the professional judgment of the auditor [2]. To support this

individual and personal judgment of the auditor, a more direct source of information in the form of an automated going concern analysis could provide a solution. In this paper a method to automate the going concern analysis was set up, using a combination of 16 forecasting algorithms. To build and validate the forecasting algorithms 225 administrations have been divided in a train and test set. The results show a confidence percentage of 97.45% for Gradient Boosting Regressor, 96.79% for Decision Tree Regressor and 77.72% for AdaBoost Regressor on the basis of the condition current liabilities for Administration 1.

The paper by Curfs et al. "How to Plot Current Pilots Results on the Audit Maturity Model [3]? The Continuum Paradigm" focuses on the possibilities and challenges of the Continuum Paradigm. Based on the existing studies, they defined the following research question: What is the actual status regarding the Continuum Paradigm? Based on a review of pilots and plotting the results of these pilots on the Audit Maturity Model by a focus group, further insight is provided regarding the actual status. The overall conclusion is that the average maturity level for Continuous Monitoring and Continuous Auditing reaches nearly stage 3: Maturing and no research has been performed based on a holistic and fully integrated continuous process.

The fourth publication by Huang et al. is entitled by "Toward a Continuous Measurement Model" [4]. The business and ERP data for accounting and auditing is close to continuous, but the accounting and auditing work is interval-based and loses the close to continuous characteristic of the business measurement process. A series of proxies for more frequent measures have emerged in the increasingly desperate attempt to have very short time market trading superiority. The objective in their paper is to propose a continuous measurement framework in critical areas of business.

Heeren et al. present their work entitled "Continuous Monitoring of Counter Accounts in Hospitality" [5]. Sustainability reporting has become common practice in organizations. A factor that is associated with the rise of sustainability reporting is greenwashing. In order to counter greenwashing practices, counter-accounting, referring to the use of information produced by actors outside a given organization or industry, aims to help verify statements made by organizations. Although counter-accounting already exists in the toolbox of the auditor, it is mainly applied in an ad-hoc manner and rarely continuous. In this study, a continuous monitoring system for counter-accounts is proposed to measure gender inequality. The application of the system is demonstrated using data from the hospitality sector regarding the fulfillment of different job titles by male and female executives. The presented results shed light on occupational gender segregation and provide a basis from which more continuous counter-accounting systems can be developed.

### III. CONCLUSION

### A. Reality or Fiction?

Although it is clear to the authors that the Continuum Paradigm becomes Reality and does not remain Fiction, the implementation is still slow. This is partly because the perceived usage of ICT in the accountancy practice in general is not very 'progressive' [6].

# B. Current research on the Continuum Paradigm

Paragraph 2 shows that meaningful research is currently being conducted in the field of the Continuum Paradigm. This research is not limited exclusively to accountancy, but relates to the entire financial sector, but also, for example, the hospitality industry.

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Our great thanks go to the organizers for the kind reception of this special track in the conference. This may include the considerable administrative effort. Special thanks belong to the many reviewers who gave the authors many valuable hints. Without the authors this track would not exist. Much thanks for the very interesting contributions and the willingness to publish and present them. This special track has contributed to 1) the connection between Information, Process, and Knowledge Management on the one hand and the Continuum Paradigm on the other, but also 2) the relevance of the specific parts of this Paradigm for A) the hospitality sector, B) the financial sector, in particular C) the accountancy industry.

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